

PATENT

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE BEFORE
THE BOARD OF PATENT APPEALS AND INTERFERENCES**

In re Application of: Yee Loong Chin <i>et al.</i>)	
)	Group Art Unit: 2878
Application No.: 10/810,173)	
)	Examiner: Livedalen, Brian J.
Filed: March 26, 2004)	
)	Confirmation No.: 7995
For: POLAROID ABSOLUTE ENCODER)	

REPLY BRIEF UNDER 37 C.F.R. §41.41

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Sir:

This is Appellants' reply to the Examiner's Answer, filed in the above-identified patent application. This Reply Brief under 37 C.F.R. §41.41 is submitted in response to the Examiner's Answer mailed December 17, 2007.

It is not believed that a fee is required to consider this Reply Brief. However, if any extension is necessary to allow consideration of this paper, such extension is hereby petitioned under 37 C.F.R. §1.136(a). Required fees are hereby authorized to be charged to Deposit Account No. 50-3718.

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Signature: /Robert A. Blaha/

Robert A. Blaha

Items 1 through 9 and 11 of the Examiner's Answer, mailed December 17, 2007 are believed accurate.

Appellants request that the Board of Patent Appeals and Interferences consider the following remarks concerning item 10 of the Examiner's Answer, titled "Response to Argument."

First, the Examiner incorrectly concludes that Appellants' first point of contention is irrelevant to the rejection at issue. Appellants' disagree.

The rejection at issue is under 35 U.S.C § 103(a), which requires that the prior art reference or references when combined disclose, teach or suggest each element of the claimed invention. Appellants' argument is that the combination of *Wijntjes* and *Hofler* fails to teach each element of the claimed invention. Accordingly, it is both relevant and logical to first point out the failure of *Wijntjes* to disclose, teach or suggest at least one element of the claimed invention and to point out the failure of *Hofler* to remedy that same failure.

Next, the Examiner points to element 802A of FIG. 16A as the third illumination light detector, which allegedly receives unaltered light; and to paragraphs 106-112 (*Wijntjes*), which allegedly disclose that element 802A is part of a "first determination module" with element 802B and their respective circuitry. Appellants would like to point out that only paragraphs 108-110 actually address elements 802A and 802B. In this regard, *Wijntjes* discloses that the 2-bit photodetectors 802A, 802B are used to determine, which of two possible 180 degree ranges of rotational movement that the rotating polarizer 114' resides within. Each 2-bit photodetector 802A, 802B is aligned with a unique one of the two semi-circular lines to detect the presence or absence of

reflected light associated with the unique one semi-circular line. Thereafter, the Examiner indicates that element 802A is separate from and operates in a completely different way than elements 120A' and 120B'. Appellants agree that FIG. 16A shows 3-phase photodetectors 120A'-120C' separate from 2-bit photodetectors 802A, 802B. Appellants further note that the output signals from the 3-phase photodetectors 120A'-120C' are processed differently than the output signals from the 2-bit photodetectors 802A, 802B. However, Appellants disagree with the Examiner's conclusion that photodetectors 120A'-120C' operate in a completely different way than photodetectors 802A, 802B. A photodetector reacts in a known way to incident electromagnetic energy. Photodetectors operate in a photovoltaic mode or a photoconductive mode. There is nothing in *Wijntjes* that indicates that the photodetectors 120A'-120C' and the photodetectors 802A, 802B operate in a completely different way. Both react in a known way to incident electromagnetic energy. The Examiner refers to paragraph 108 in support of the contention that the 3-phase photodetectors 120A'-120C' operate in a completely different way than 2-bit photodetectors 802A, 802B. Appellants note that there is no reference whatsoever in paragraph 108 as to the operation of 3-phase photodetectors 120A'-120C' and no reference whatsoever to a different mode of operation.

Thereafter, the Examiner notes that neither FIG. 10A nor FIG. 16A disclose a corresponding filter to alter the light traveling to element 802A. Appellants' independent claims are not so limited. In addition, Appellants respectfully submit that the Examiner's analysis of the teachings or lack thereof concerning *Wijntjes* are not conclusive. FIG. 16A is a block diagram of the electronic subsystem for the system of FIG. 10A. (See

Wijntjes paragraph 38.) In this regard, FIG. 10A does not show either 2-bit photodetector 802A or 2-bit photodetector 802B. Consequently, it is not surprising that FIG. 10A also does not include other features of *Wijntjes* optical polarization angle encoder.

Interpreting the embodiment of FIG. 10A and FIG. 16A in light of the other embodiments, Appellants reach the exact opposite conclusion as the Examiner. In this regard, the Examiner alleges that FIGs. 4-7 and 9 all disclose a detector (120d) that detects unaltered light. Appellants disagree.

FIG. 4 of *Wijntjes* clearly shows a lens 112, which interrupts light 115 emitted from light source 110 before it encounters rotating polarizer 114, as well as an analyzer 116C and a lens 118, which alters the light from light source 110 before it is received at light detector 120D. Appellants fail to understand how the Examiner believes that lens 112, analyzer 116C and lens 118 do not alter the light from light source 110. Moreover, the embodiment illustrated in FIG. 4 clearly contradicts the Examiner's contention that *Wijntjes* contemplates a detector for detecting unaltered light.

FIG. 5 of *Wijntjes* clearly shows a lens 112 that alters light emitted from light source 110 before it encounters the reflective polarizer 314 on its way to light detector 120D. Appellants fail to understand how the Examiner believes that lens 112 does not alter the light from light source 110. Moreover, the embodiment illustrated in FIG. 5 clearly contradicts the Examiner's contention that *Wijntjes* contemplates a detector for detecting unaltered light.

FIG. 6 of *Wijntjes* clearly shows a fiber 344 and a lens 112 that alter light emitted from light source 110 before it encounters reflective polarizer 314 and is received at light detector 120D. Appellants fail to understand how the Examiner believes that fiber 344

and lens 112 do not alter the light from light source 110. Moreover, the embodiment illustrated in FIG. 6 clearly contradicts the Examiner's contention that *Wijntjes* contemplates a detector for detecting unaltered light.

FIG. 7 of *Wijntjes* clearly shows a lens 112 that alters light emitted from light source 110 before it encounters transmissive polarizer 414 on its way to light detector 120D. Appellants fail to understand how the Examiner believes that lens 112 does not alter the light from light source 110. Moreover, the embodiment illustrated in FIG. 7 clearly contradicts the Examiner's contention that *Wijntjes* contemplates a detector for detecting unaltered light.

FIG. 9 of *Wijntjes* clearly shows a lens 112 that alters light emitted from light source 110 before it encounters reflective polarizer 654C on its way to light detector 120D. Appellants fail to understand how the Examiner believes that lens 112 does not alter the light from light source 110. Moreover, the embodiment illustrated in FIG. 9 clearly contradicts the Examiner's contention that *Wijntjes* contemplates a detector for detecting unaltered light.

Accordingly, FIGs. 4-7 and 9 clearly show a detector 120D that detects light altered by an element in addition to a polarizer. Consequently, the combination of *Wijntjes* and *Hofler* cannot be said to teach Appellants' claimed systems and methods.

Appellants further contend that the combination of *Wijntjes* and *Hofler* is improper for at least the reason that *Wijntjes* teaches away from Appellants' claimed invention. In reply, the Examiner alleges that this argument is misplaced because the alleged missing limitation is not the reason for combining the references. The Examiner concludes that such an argument should only be presented regarding the limitation

necessitating the combination. The Examiner offers no reference from case law or from the Manual of Patent Examination Procedure (MPEP) in support of this contention. Appellants disagree and submit that the Examiner's application of the law is in error and the law in fact is not so limited.

"A reference may be said to teach away when a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant." *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994); see *KSR*, 127 S. Ct. at 1739–40 (explaining that when the prior art teaches away from a combination, that combination is more likely to be nonobvious). Appellants have clearly shown that *Wijntjes* discloses systems and methods that alter light in a manner that is contrary to Appellants' claimed systems and methods. Appellants respectfully submit that when the prior art teaches away from a combination for any reason that it is more likely that one of ordinary skill would not make the proposed combination. While such a teaching away is not dispositive, such a teaching is evidence that must be considered when making a determination of obviousness. It is clear that the Examiner has simply discounted Appellants' argument regarding the combination of *Wijntjes* and *Hofler* teaching away from Appellants' claimed systems and methods for a reason that is untenable under the law. Accordingly, Appellants' respectfully request that the Board of Patent Appeals and Interferences consider the above-referenced embodiments and arguments submitted in the Appeal Brief concerning such teaching away.

Next, the Examiner misreads *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S.

____ (2007) in concluding that if sufficient motivation is set forth in an obviousness

analysis that it may not be necessary to make detailed findings regarding the skill of a person of ordinary skill in the art. When read in context, that is, when the claimed subject matter involves more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement, it is clear that *KSR* requires an explicit analysis of the background knowledge possessed by a person having ordinary skill in the art. See *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. ____ (2007); Opinion at pp. 13-14. In accordance with *In re Kahn*, this analysis should be made explicit to facilitate review. See *In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006). A conclusory statement indicating what would have been obvious to one of ordinary skill in the art at the time the invention was made fails to provide any statement of facts and analysis regarding the skill level of a person of ordinary skill in the art. Furthermore, Appellants submit that there is no support for the Examiner's contention that if sufficient motivation is set forth it may not be necessary to analyze the background knowledge possessed by a person having ordinary skill in the art. As reiterated by the Supreme Court in *KSR*, the framework for the objective analysis for determining obviousness under 35 U.S.C. 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). Obviousness is a question of law based on underlying factual inquiries. The factual inquiries enunciated by the Court are as follows: (A) Ascertaining the differences between the claimed invention and the prior art; and (B) Ascertaining the differences between the claimed invention and the prior art; and (C) Resolving the level of ordinary skill in the pertinent art. Appellants submit that *KSR* did not introduce an exception under the law where it may not be necessary to analyze the background knowledge

possessed by a person having ordinary skill in the art. The MPEP recognizes the same and reminds Examiners to enter factual findings when resolving the level of ordinary skill in the pertinent art. (See MPEP § 2143, II, C.)

Appellants acknowledge that the Examiner, on page 13 of the Examiner's Answer, has provided the statement that one of ordinary skill in the art is someone with a master's degree in the field of optoelectronics who would appreciate that concentric codes being in contact versus spaced apart is an obvious variation. However, Appellants respectfully submit that such a statement, even if included in the statement of the rejection of the claims, is merely conclusory and does not reach the level required to establish a *prima facie* case of obviousness of Appellants' claimed systems and methods.

Lastly, the first full paragraph on page 13 of the Examiner's Answer attacks Appellants' disclosure for allegedly failing to provide any reason why concentric codes in contact in a prior art system produces an unpredictable result. The law requires the USPTO to establish a *prima facie* case of obviousness. Once a *prima facie* case of obviousness has been met, Appellants may offer secondary reasons for patentability including a showing of an unpredictable result. It is illogical and improper to require a statement indicative of an unpredictable result in Appellants' disclosure. Such a statement would require foreknowledge of the prior art references, the Examiner's application of the same and the presumption that a *prima facie* case of obviousness could be established by the Examiner. Accordingly, the failure of Appellants' disclosure to provide a reason why concentric codes in contact in a prior art system would produce an unpredictable result is moot absent the establishment of a *prima facie* case of obviousness.

For at least the foregoing reasons, as well as the additional reasons set forth in Appellants' Appeal Brief, Appellants respectfully submit that the Examiner's rejections of claims 1-22 are legally deficient and must be overturned.

Respectfully submitted,

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